

01-april-2022

**Varnostne in nadzorne naprave za gorilnike in aparate na plin in/ali tekoča goriva -
Splošne zahteve - Popravek AC**Safety and control devices for burners and appliances burning gaseous and/or liquid
fuels - General requirementsSicherheits- und Regeleinrichtungen für Brenner und Brennstoffgeräte für gasförmige
und/oder flüssige Brennstoffe - Allgemeine AnforderungenÉquipements auxiliaires pour brûleurs et appareils utilisant des combustibles gazeux ou
liquides - Exigences générales**Ta slovenski standard je istoveten z: EN 13611:2019/AC:2021**

SIST EN 13611:2019/AC:2022
<https://standards.iteh.ai/catalog/standards/sist/55570ad6-a695-4561-9d28-b8934cde6aa0/sist-en-13611-2019-ac-2022>

ICS:

23.060.40	Tlačni regulatorji	Pressure regulators
27.060.20	Plinski gorilniki	Gas fuel burners

SIST EN 13611:2019/AC:2022**en,fr,de**

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EUROPEAN STANDARD

EN 13611:2019/AC

NORME EUROPÉENNE

September 2021

EUROPÄISCHE NORM

ICS 23.060.40

English version

Safety and control devices for burners and appliances burning gaseous and/or
liquid fuels - General requirements

Équipements auxiliaires pour brûleurs et
appareils utilisant des combustibles gazeux
ou liquides - Exigences générales

Sicherheits- und Regeleinrichtungen für
Brenner und Brennstoffgeräte für gasförmige
und/oder flüssige Brennstoffe - Allgemeine
Anforderungen

This corrigendum becomes effective on 1 September 2021 for incorporation in the official
English version of the EN.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Ref. No.: EN 13611:2019/AC:2021 E

EN 13611:2019/AC:2021 (E)

1 Modification to Table E.1, Electrical/electronic component faults modes

Replace the row for component type:

"

Transformers: According to EN 61558-2-6:2009 OR EN 61558-2-16:2009 + A1:2013 All other types	X	X	
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"

with:

"

Transformers: According to EN 61558-2-6:2009 or EN 61558-2-16:2009 + A1:2013 All other types		X	
	X	X	

"

to read:

"

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Component type	Short	Open ^a	Remarks
Fixed resistors:			
Thin film (wound filament)		x	Includes SMD type
Thick film (flat)		x	Includes SMD type
Wire-wound (single layer)		x	
All other types	x	x	
Variable resistors (e.g. potentiometer/trimmer):			
Wire-wound (single layer)		x	
All other types	x ^b	x	
Capacitors:			
X1 and Y types according to EN 60384-14:2013		x	
Metallized film according to EN 60384-16:2005		x	
All other types	x	x	
Inductors:			
Wire-wound (single layer)		x	
All other types	x	x	
Diodes:			
All types	x	x	
Transistors:			
All types (e.g. Bipolar: LF; RF; microwave; FET; Thyristor; Diac; Triac; Uni junction)	x ^b	x	^c
Hybrid circuit	d	d	
Integrated circuits	x ^e	x	For IC outputs note ^c applies
Photocouplers	x ^f	x	
Relays:			
Coils	x	x	If the relay complies with EN 61810-1:2015 the failure mode short circuit need not be considered.
Contacts	x ^{g h o}	x	
Reed-relays	x	x	Contacts only

EN 13611:2019/AC:2021 (E)

Component type	Short	Open ^a	Remarks
Electromechanical lock-out elements:			
Coils	x	x	
Contacts	x ^p	x	
Transformers:			
According to EN 61558-2-6:2009 or EN 61558-2-16:2009 + A1:2013		x	
All other types	x	x	
Crystals	x	x	i
Switches	x	x	j
Connections (jumper wire)		x	k
Cable, wiring and connectors		x	
Printed circuit board conductors	x ^m	x ^l	
Temperature sensors:			
All types (e.g. NTC, PTC, PT 100 and thermocouples)	x ⁿ	x ⁿ	

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- a Only opening of one pin at a time.
- b Short circuit each pin in turn with every other pin; only two pins at a time.
- c For discrete or integrated thyristor type devices such as triacs and SCRs, fault conditions shall include short circuit of any terminals with the third terminal open circuited. The effect of any full wave type component, such as a triac going into a half wave condition, either controlled or uncontrolled (thyristor or diode, respectively) shall be considered.
- d Failure modes for individual components of the hybrid circuit are applicable as described for the individual components in this table.
- e The short circuit of any two adjacent terminals and the short circuiting of:
- a) each terminal to the IC-supply, when applicable at the IC,
 - b) each terminal to the IC-ground, when applicable at the IC.
- The number of tests implied for integrated circuits can normally make it impracticable to apply all the relevant fault conditions or to assess the likely hazards from an appraisal of the circuit diagram of the integrated circuit.
- It is therefore permissible first to analyse in detail all the possible mechanical, thermal and electrical faults which can develop either in the control itself or its output, due to the malfunction of the electronic devices or other circuit components, separately or in any combination.
- An analysis (e.g. a fault tree analysis) shall be conducted to include the results of multiple steady-state conditions to outputs and programmed bi-directional terminals for the purpose of identifying additional fault conditions for consideration. The failure mode "short circuit" is excluded between isolated sections for such ICs that have isolated sections. The isolation between the sections shall conform to the requirements of EN 60730-1:2016, 13.2 for operational insulation.
- f When photocouplers conform to EN 60747-5-2:2001+A1:2002, Clause 8 "Photocouplers (optocouplers) providing protection against electrical shock", and with the requirements for double or reinforced insulation of EN 60730-1:2016, Clause 20, short circuits between the input and output pins are not considered.
- g The failure modes "short circuit" and "mechanical break-down" need not to be considered when the control-including the relay – successfully completed the long-term performance tests of 7.7 (under nominal load of relay contacts) and if the relay is successfully tested for 3 million cycles under no-load condition in compliance with EN 60947-5-1:2004, C.2, and if special precautions have been taken to prevent welding of contacts, see 6.5.1. All of the following special precautions shall be fulfilled:
1. Measures to avoid welding:
 - 1.1 Contacts closing on short-circuit:

Rating of the fuse: $(I_N) < 0,6 \cdot (I_e)$.